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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/473,953	12/29/1999	THOMAS S. AFFERTON	IDS-113523	1668

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EXAMINER	
GEORGE, KEITH M	
ART UNIT	**PAPER NUMBER**
2663	

DATE MAILED: 01/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/473,953	AFFERTON, THOMAS S.	
	Examiner	Art Unit	
	Keith M. George	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 July 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 July 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification does not appear to teach a first and second protection SONET ring, the first protection SONET ring distinct from the second protection SONET ring.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 2, 4-8, 10-12, 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chapman, U.S. Patent 5,974,027, hereinafter Chapman, in view of Chan et al., U.S. Patent 6,301,254, hereinafter Chan.

5. Referring to claims 1, 7, 16 and 20, Chapman teaches a method, in an SDH network, for 1:n path protection architecture where one protection path or section serves n working paths or sections (column 6, lines 64-65 and column 1, lines 31-32). In figure 1, Chapman teaches four nodes 1, 2, 3, 4. Nodes 1 and 2 are connected by working path 5, while nodes 3 and 4 are connected by working path 6 (first SONET ring family). A protection path 7 is provided which is of a closed ring shape and serves to interconnect all the noted 1, 2, 3, 4 in the network and protect both working paths 5 and 6 (second protection SONET ring) (column 3, lines 14-22). Two automatic switch initiation criteria are provided at least one of which must be flagged before any switching action occurs onto the protection path 7 (detecting a service alarm in a SONET ring and directing traffic onto the protection ring) (column 3, lines 32-35). Chapman also teaches a Lockout of protection that prevents any of the worker paths from accessing the protection ring. If any path is currently utilizing the protection ring then this command shall cause the traffic to switch back to the worker path (determining whether there are any alarms on the protection ring, determining if the ring is in use and marking the ring as being in use) (column 3, lines 53-57). Chapman teaches all of the above with the possible exception that the first SONET ring family is a protection SONET ring. Chan teaches that a SONET network is often implemented as a SONET ring of which there are three types: Unidirectional Path Switched Ring (UPSR), 2-Fiber Bi-directional Line-Switched Ring (BLSR) and 4-Fiber BLSR. A UPSR normally has working traffic and protection traffic provisioned such that they travel in opposite directions around the ring. A UPSR implements "self-healing" by using a Path Selector to compare the working and protection signals (SONET paths) that are terminating at the receiving node in order to select which of the two to drop (column 2, lines 14-25 and 37-52). At

the time the invention was made, it would have been obvious to a person of ordinary skill in the art that the SONET rings taught by Chapman as working paths 5 and 6 in figures 1 would be of the type described by Chan which includes a protection ring in the opposite direction. This protection ring qualifies as a first protection SONET ring and the protection path 7 qualifies as the second protection SONET ring. One of ordinary skill in the art would have been motivated to do this because Chan is teaching standard background information regarding SONET rings which would have been well known to one of ordinary skill in the art implementing the teachings of Chapman.

6. Referring to claims 2 and 8, Chapman and Chan teach the method as described in claims 1 and 7 above but are possibly silent with respect to the ring family being a set of rings that share the same fiber sheath. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art that the drawings of Chapman do not specifically indicate if the rings are a part of the same fiber sheath but that it would definitely be possible for all of the rings to be a part of the same fiber sheath. One of ordinary skill in the art would understand that a fiber sheath typically contains many individual fibers and that a drawing indicating two or more separate fiber links does not necessarily require running a single strand of fiber to implement each link in the drawing.

7. Referring to claims 4 and 10, Chapman and Chan teach the method described in claims 1 and 7 above and Chapman also shows figure 1 that the protection ring 7 has nodes in all nodes served by the ring family, 1, 2, 3, 4.

8. Referring to claims 5 and 11, Chapman and Chan teach the method described in claims 1 and 7 above and Chapman also shows in figure 1 that the failed facilities are routed on the protection ring in the same manner as on the working channel.

9. Referring to claims 6 and 12, Chapman and Chan teach the method described in claims 5 and 11 above and Chapman also teaches a means of telling the remote end to enable or disable the bridging of traffic along the long path if traffic has been selected from the shorter route instead (column 4, lines 38-53).]

10. Referring to claims 14 and 18, Chapman and Chan teach the method described in claims 1 and 7 above and Chapman also teaches that preferably the network is operative when the protection channel is not being used for protective purposes to route

11. Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chapman and Chan as applied to claims 2 and 8 above, and further in view of Fishman, U.S. Patent 5,982,517 (hereinafter Fishman). Chapman and Chan teach the method described in claims 2 and 8 above but are possibly silent with respect to the ring family sharing dense wavelength division multiplexed optical transport systems. Fishman teaches restoration technique in mixed telecommunications networks comprising SONET rings and WDM point-to-point links by using WDM link protection using colorblind and wavelength selective optical switches (column 2, lines 9-14). At the time the invention was made, it would have been obvious to a person of ordinary sill in the art to use the WDM technique of Fishman on the protection arrangement of Chapman and Chan. One of ordinary skill in the art would have been motivated to do this to provide a level of protection for WDM links equivalent to SONET ring protection or sufficient for required network reliability (Fishman, column 2, lines 1-4).

12. Claims 13 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chapman and Chan as applied to claims 1 and 7 above, and further in view of Takatori et al., U.S. Patent 5,475,676, hereinafter Takatori. Chapman and Chan teach the method described in reference to claims 1 and 7 above with the possible exception of determining whether there are any service alarms on the second protection SONET ring. Takatori teaches in figure 8 a selector controller that monitors alarms on both the working and protection ring in a clockwise and counter clockwise ring (column 6, lines 2-20). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to monitor a protection ring for alarms before live traffic is transferred to it. One of ordinary skill in the art would have been motivated to do this so that live traffic is not sent to a ring that can currently handle the traffic, thus causing an outage, which is exactly what the protection rings are attempting to avoid.

Allowable Subject Matter

13. Claims 14, 15, 18 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and if the 112 1st paragraph rejection is overcome.

Response to Arguments

14. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith M. George whose telephone number is 571-272-3099. The examiner can normally be reached on M-Th 7:00-4:30, alternate F 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Keith M. George
29 December 2004

CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 1/3/05